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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,507	10/15/2003	Nan Marie Jockerst	62004-1211	9028

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EXAMINER	
PHAN, HANH	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/687,507	JOCKERST ET AL.	
	Examiner	Art Unit	
	Hanh Phan	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *03/18/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 11/03/2004.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of U.S. Patent No. 6,603,584 (Jokerst et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-13 of the instant application are encompassed by claims 1-31 of U.S. Patent No. 6,603,584 (Jokerst et al).

Regarding claims 1 and 6, Jokerst (U.S. Patent No. 6,603,584) discloses a bi-directional optical link, comprising:

a thin film detector having an upper surface facing a predetermined direction to receive incident light; and

a thin film emitter stacked over the upper surface and oriented to direct a beam of light toward the predetermined direction (see claims 1 and 6 of U.S. Patent No. 6,603,584).

Regarding claims 2 and 7, Jokerst (U.S. Patent No. 6,603,584) discloses the thin film emitter is a vertical cavity surface emitting laser (see claims 2 and 3 of U.S. Patent No. 6,603,584).

Regarding claims 3 and 8, Jokerst (U.S. Patent No. 6,603,584) discloses the thin film emitter is a light emitting diode (see claim 3 of U.S. Patent No. 6,603,584).

Regarding claims 4 and 9, Jokerst (U.S. Patent No. 6,603,584) discloses the thin film emitter further comprises a pair of electrical connectors for electrically coupling the thin film emitter to a circuit (see claim 11 of U.S. Patent No. 6,603,584).

Regarding claims 5 and 10, Jokerst (U.S. Patent No. 6,603,584) discloses the thin film detector is an inverted metal-semiconductor-metal photodetector (see claims 5 and 15 of U.S. Patent No. 6,603,584).

Regarding claim 11, Jokerst (U.S. Patent No. 6,603,584) discloses the thin film detector and the thin film emitter comprise a substrate-removed semiconductor material (see claims 2, 3 and 5 of U.S. Patent No. 6,603,584).

Regarding claim 12, Jokerst (U.S. Patent No. 6,603,584) discloses the step of stacking comprises stacking to occlude a portion of the thin film detector (see claims 1 and 6 of U.S. Patent No. 6,603,584).

Regarding claim 13, Jokerst (U.S. Patent No. 6,603,584) discloses the step of orienting comprises orienting the thin film emitter to emit the beam of light while the detector receives the incident light (see claims 1 and 6 of U.S. Patent No. 6,603,584).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 6-9 and 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsuji et al (US Patent No. 5,664,035).

Regarding claims 1 and 6, referring to Figures 1, 2b and 4b, Tsuji discloses a bi-directional optical link (Fig. 1), comprising:

a thin film detector (221)(Fig. 1) having an upper surface facing a predetermined direction to receive incident light; and

a thin film emitter (222)(Fig. 1) stacked over the upper surface and oriented to direct a beam of light toward the predetermined direction (see col. 4, lines 36-46 and col. 5, lines 4-62).

Regarding claims 2 and 7, Tsuji further teaches the thin film emitter is a vertical cavity surface emitting laser (see col. 4, lines 58-62).

Regarding claims 3 and 8, Tsuji further teaches the thin film emitter is a light emitting diode (see col. 4, lines 58-62).

Regarding claims 4 and 9, Tsuji further teaches the thin film emitter further comprises a pair of electrical connectors for electrically coupling the thin film emitter to a circuit (see Fig. 1).

Regarding claim 11, Tsuji further teaches the thin film detector and the thin film emitter comprise a substrate-removed semiconductor material (Fig. 1).

Regarding claim 12, Tsuji further teaches the step of stacking comprises stacking to occlude a portion of the thin film detector (Fig. 1).

Regarding claim 13, Tsuji further teaches the step of orienting comprises orienting the thin film emitter to emit the beam of light while the detector receives the incident light (Fig. 1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-4, 6-9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krause (US Patent No. 5,448,077) in view of Tsuji et al (US Patent No. 5,664,035).

Regarding claims 1 and 6, referring to Figure 8, Krause discloses a bi-directional optical link, comprising:

a detector (221)(Fig. 8) having an upper surface facing a predetermined direction to receive incident light; and

an emitter (156)(Fig. 8) stacked over the upper surface and oriented to direct a beam of light toward the predetermined direction (col. 3, lines 8-24).

Krause differs from claims 1 and 6 in that he fails to teach the detector is a thin film detector and the emitter is a thin film emitter. However, Tsuji in US Patent No. 5,664,035 teaches the detector is a thin film detector and the emitter is a thin film emitter (Figs. 1 and 2b, col. 4, lines 36-46 and col. 5, lines 4-62). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the detector is a thin film detector and the emitter is a thin film emitter as taught by Tsuji in the system of Krause. One of ordinary skill in the art would have been motivated to do this since Tsuji suggests in column 4, lines 36-46 and col. 5, lines 4-62 that using such the detector is a thin film detector and the emitter is a thin film emitter have advantage of allowing decreasing optical loss and increasing collection, reducing weight, size and cost of the whole of system.

Regarding claims 2 and 7, the combination of Krause and Tsuji teaches the thin film emitter is a vertical cavity surface emitting laser (col. 4 of Tsuji, lines 58-62).

Regarding claims 3 and 8, the combination of Krause and Tsuji teaches the thin film emitter is a light emitting diode (col. 4 of Tsuji, lines 58-62).

Regarding claims 4 and 9, the combination of Krause and Tsuji teaches the thin film emitter further comprises a pair of electrical connectors for electrically coupling the thin film emitter to a circuit (Fig. 1 of Tsuji).

Regarding claim 11, the combination of Krause and Tsuji teaches the thin film detector and the thin film emitter comprise a substrate-removed semiconductor material (Fig. 1 of Tsuji).

Regarding claim 12, the combination of Krause and Tsuji teaches the step of stacking comprises stacking to occlude a portion of the thin film detector (Fig. 1 of Tsuji).

Regarding claim 13, the combination of Krause and Tsuji teaches the step of orienting comprises orienting the thin film emitter to emit the beam of light while the detector receives the incident light (Fig. 1 of Tsuji).

Allowable Subject Matter

8. Claims 5 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

HANH PHAN
PRIMARY EXAMINER